

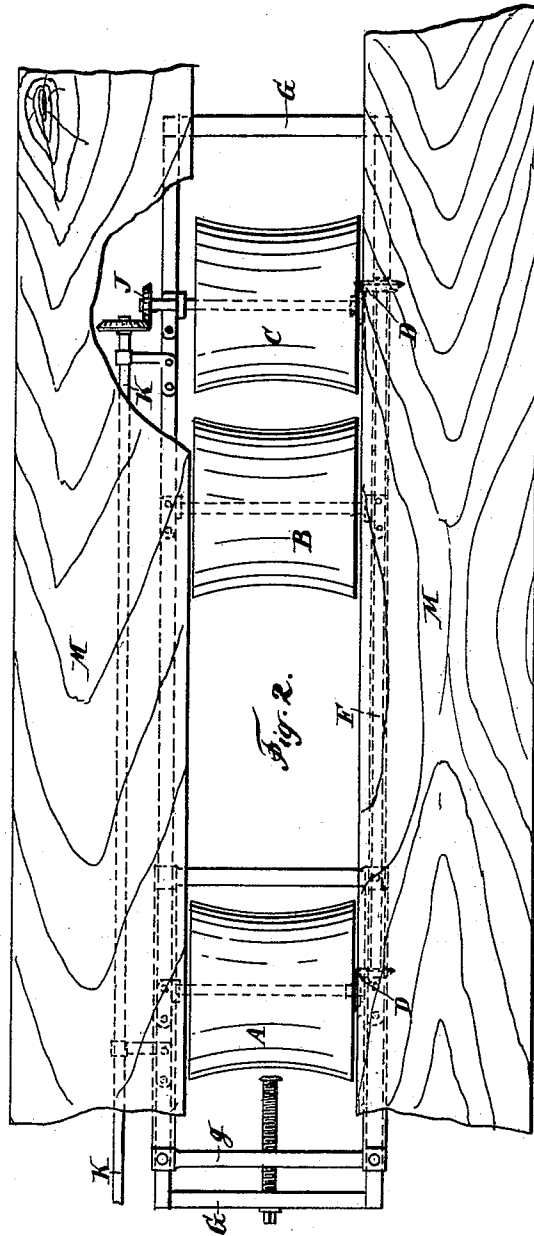
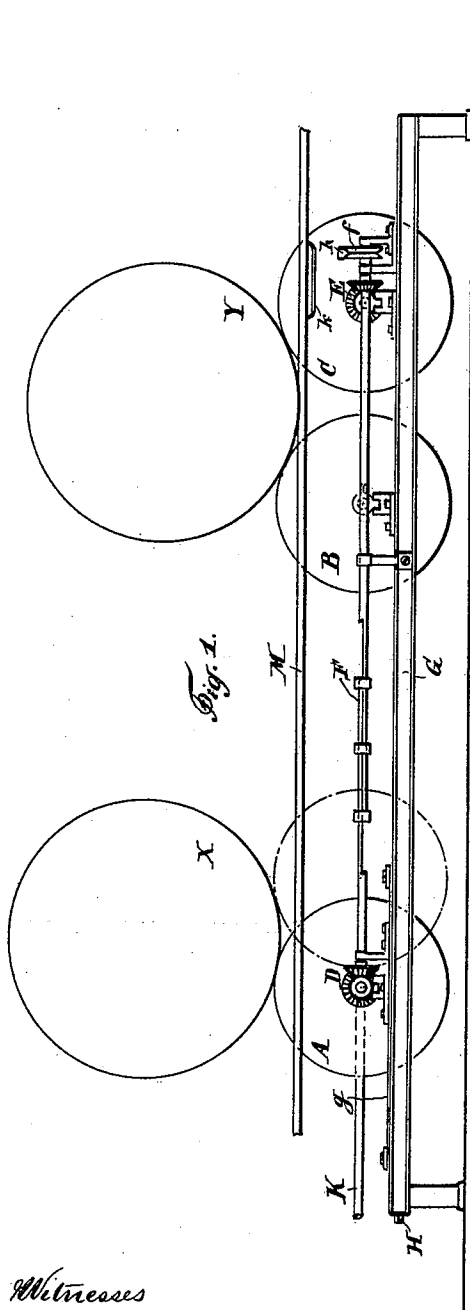
(No Model.)

2 Sheets—Sheet 1.

L. F. GUIGNARD.
HOME TRAINER FOR CYCLISTS.

No. 463,862.

Patented Nov. 24, 1891.



Witnesses

Chas. N. Smith
Geo. T. Pinckney

Inventor

Louis Florian Guignard
per Lemuel W. Serrell
att'y

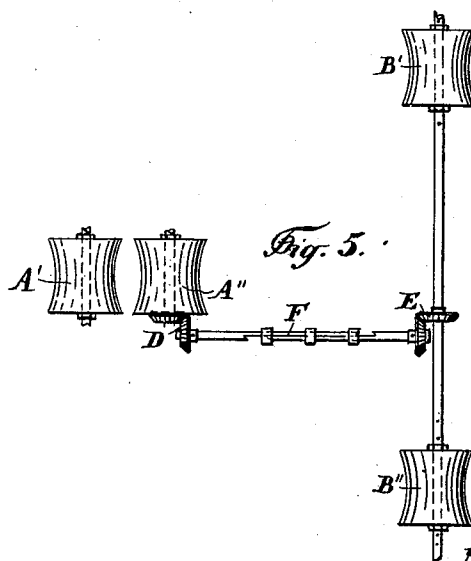
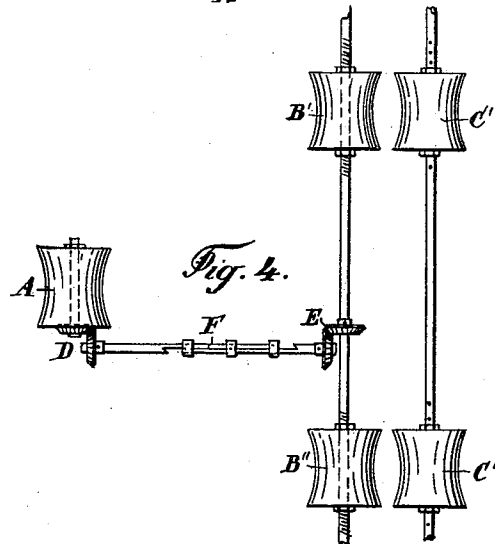
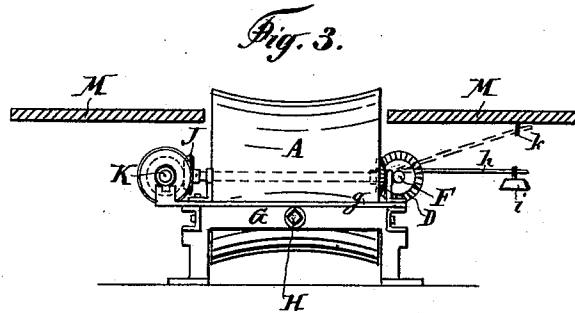
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UNITED STATES PATENT OFFICE.

LOUIS FLORIAN GUIGNARD, OF LAUSANNE, SWITZERLAND.

HOME TRAINER FOR CYCLISTS.

SPECIFICATION forming part of Letters Patent No. 463,862, dated November 24, 1891.

Application filed July 23, 1891. Serial No. 400,400. (No model.)

To all whom it may concern:

Be it known that I, LOUIS FLORIAN GUIGNARD, gentleman, of Lausanne, Switzerland, have invented certain new and useful Improvements in Home Trainers for Cyclists, of which the following is a specification.

This invention relates to a rotating support for bicycles or tricycles, whereby the wheels of the cycle can be propelled as usual in riding, but the cycle will remain in a fixed position, whereby the exercise of riding can be obtained in a house or other building without the exposure incident to riding, especially in inclement weather.

In carrying out this invention I provide rolls or wheels for supporting the wheels of the cycle, and these rolls or wheels are connected together so that all the wheels or rolls are set in motion by the ordinary rotary movement given to the propelling-wheel of the cycle.

In the drawings, Figure 1 is a diagrammatic side view. Fig. 2 is a plan view, partially broken open to represent the gearing. Fig. 3 is an end view of the cycle-support with the platforms in section. Fig. 4 is a diagrammatic plan view of the support adapted to tricycles, and Fig. 5 is a diagrammatic plan view of a modification in the arrangement of the supporting-rolls.

The circles at X Y indicate the positions of the wheels of the cycle. These rest upon rolls A B C, which are geared together to a greater or less extent, so that motion given to one of the rolls is communicated to the others. These rolls A B C are represented in Figs. 1 and 3 as supported by a stationary frame G, the roll A being in a secondary frame g, resting upon the frame G, and there is a screw H, by which the position of the frame g can be varied to bring the roll A at the proper distance from the rolls B C to adapt the apparatus to the sizes of the cycles. The beveled gears D D and shaft F are represented as connecting the axles of the rolls A and C, and the shaft F is made in two parts, so that it may extend or be shortened as the secondary frame g is moved upon the main frame G. It is preferable to make the rolls A B C concave on their peripheries, so that the wheels of the cycle will tend to remain in the lower portions of such rolls, and when a rotary motion is given to either cycle-wheel X or Y by the cranks or treadles or other

known appliances the rolls A B C will all be revolved, and the rider of the cycle can take the exercise desired while the cycle remains in the fixed position.

For tricycles the rolls can be arranged as represented in Figs. 4 and 5, the rolls B' B'' C' C'', Fig. 4, being adapted to support the hind wheels of such tricycles and the roll A the front wheel, and the roll A is geared to the shaft of the rolls B' B'' by the beveled gears D E and extensible shaft F. In this construction the pairs of rolls B' B'' C' C'' keep the cycle in its proper position; but all the wheels thereof are rotated simultaneously.

In Fig. 5 the device is modified by the use of one pair of hind rolls B' B'' and two front rolls A' A''. The driving-wheel in this case will rest upon the rolls A' A'', and the parts will be adjusted so that the hind wheels will rest upon and be directly over the rolls B' B''. The arrangement of the bearings for the respective rolls and the gearing for transmitting motion from one roll to the other may be of any desired character. The rolls B' B'' C' C'' should be adjustable upon their axles to adapt them to tricycles of different sizes, and in which the hind wheels are at different distances apart.

This device is adapted to training or instructing persons in riding bicycles, and in order to furnish a resistance to the movement of the parts so as to require the exercise of greater force, as in ascending a hill, a brake may be applied to either of the rolls.

At f, Fig. 1, a pulley is represented with a brake-lever h and adjustable weight i for applying to the shaft F more or less friction and producing the required resistance to the movements of the parts, and the brake H may be put out of action by hanging the same upon the hook, Fig. 3.

A counter or speed-indicator of any desired character may be applied to the cycle or to the training-machine for indicating the speed or the distance traveled, or both. The machine may also be combined with a cursor or slide on a board or dial, or with a table or platform representing a race-course, and at J, Fig. 2, I have represented beveled gearing, which may be employed for rotating a shaft K for giving motion to any device that may be used in connection with the cycle-support

or training-machine. This device is particularly adapted to use in theaters or similar places of amusement, because the supporting-rolls being concealed under the platform there
5 will be an appearance of a race where several machines are used, and the distance cursor or slide can be employed in changing the positions of one apparatus in relation to another in imitation of a race. The rider can steer
10 the machine as usual in maintaining his balance, and in the case of beginners the machine may be steadied by lateral wires.

I prefer the concave form represented for the peripheries of the rolls A B C, but do
15 not limit myself in this particular, and it is preferable to drive the rolls at a uniform surface speed to correspond with the movement of the wheels of the cycle if resting upon the ground.

20 I claim as my invention—

1. The combination, in an exercising-ma-

chine, of rolls adapted to receive the wheels of a cycle, supports for such rolls, and gearing for causing the rolls to rotate together when one of such rolls receives its motion
25 from the motor-wheel of the bicycle or tricycle resting upon such rolls, substantially as set forth.

2. The combination, with the wheels in a cycle, of rolls for supporting such wheels, gearing for connecting the rolls together, a supporting-frame for the rolls, and mechanism
30 for adjusting the relative positions of the rolls to accommodate the cycle-wheels, substantially as set forth.

In testimony whereof I have signed my
35 name to this specification in the presence of two subscribing witnesses.

LOUIS FLORIAN GUIGNARD.

Witnesses:

E. IMER SCHNEIDER,

G. PRENTICE NAYLOR.